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Attorney Docket Number	Serial No.
RA9-99-0110/4269-83	09/430,501
Applicant: Hwang, et al.	
Filing Date : October 29, 1999	Group 2731

U. S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1	5,835,538	11/10/98	Townshend	375	295	
	2	5,831,561	11/3/98	Cai et al.	341	106	
	3	5,809,075	9/15/98	Townshend	375	254	
	4	5,801,695	9/1/98	Townshend	375	340	
	5	5,793,809	8/11/98	Holmquist	375	242	
	6	5,784,405	7/21/98	Betts et al.	375	222	
	7	5,778,024	7/7/98	McDonough	375	216	
	8	5,768,311	6/16/98	Betts et al.	375	222	
	9	5,761,247	6/2/98	Betts et al.	375	316	
	10	5,757,849	5/26/98	Gelblum et al.	375	222	
	11	5,754,594	5/19/98	Betts et al.	375	285	
	12	5,729,226	3/17/98	Betts et al.	341	94	
	13	5,598,401	1/28/97	Blackwell et al.	379	94	
	14	5,546,395	8/13/96	Sharma et al.	370	84	
	15	5,534,913	7/9/96	Majeti et al.	348	7	
	16	5,528,679	6/18/96	Taarud	379	34	
	17	5,528,625	6/18/96	Ayanoglu et al.	375	222	
	18	5,406,583	4/11/95	Dagdeviren	375	5	
	19	5,394,437	2/28/95	Ayanoglu et al.	375	222	
	20	5,394,110	2/28/95	Mizoguchi	329	304	
	21	5,291,479	3/1/94	Vaziri et al.	370	58.2	
	22	5,253,291	10/12/93	Naseer et al.	379	406	
	23	5,210,755	5/11/93	Nagler et al.	370	108	
	24	5,157,690	10/20/92	Buttle	375	14	
	25	5,134,611	7/28/92	Steinka et al.	370	79	
	26	5,119,403	6/2/92	Krishnan	375	39	
	27	5,119,401	6/2/92	Tsujimoto	375	14	
	28	5,067,125	11/19/91	Tsuchida	370	79	
	29	5,052,000	9/24/91	Wang et al.	371	43	
	30	5,040,190	8/13/91	Smith et al.	375	4	
	31	5,033,062	7/16/91	Morrow et al.	375	7	
	32	5,014,299	5/7/91	Klupt et al.	379	98	
	33	4,995,030	2/19/91	Helf	370	32.1	
	34	4,985,902	1/15/91	Gurcan	375	14	
	35	4,972,360	11/20/90	Cuckier et al.	364	724.04	
	36	4,901,333	2/13/90	Hodgkiss	375	98	
	37	4,890,303	12/26/89	Bader	375	107	
	38	4,884,285	11/28/89	Heynen et al.	375	25	
	39	4,868,863	9/19/89	Hartley et al.	379	98	
	40	4,797,898	1/10/89	Martinez	375	7	

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41	4,760,598	7/26/88	Ferrell	380	44	
42	4,720,861	1/19/88	Bertrand	381	36	
43	4,578,796	3/25/86	Charalambous et al.	375	8	
44	4,577,310	3/18/86	Korsky et al.	370	58	
45	4,450,556	5/22/84	Boleda et al.	370	58	
46	4,434,322	2/28/84	Ferrell	178	22.13	
47	4,270,027	5/26/81	Agrawal et al.	179	81R	
48	4,237,552	12/2/80	Aikoh et al.	370	83	
49	4,132,242	1/2/79	Carroll, Jr.	137	263	
50	4,112,427	9/5/78	Hofer et al.	340	347	
51	3,729,717	4/24/73	de Koe et al.	340	172.5	
52	3,683,120	8/8/72	Schenkel	179	15A	
53	3,557,308	1/19/71	Alexander et al.	178	69.5	
54	5,918,204	6/29/99	Tsurumaru	704	214	
55	5,914,982	6/22/99	Bjarnason et al.	375	222	
56	5,911,115	6/8/99	Nair et al.	455	63	
57	5,887,027	3/23/99	Cohen et al.	375	222	
58	5,881,102	3/9/99	Samson	375	222	
59	5,881,066	3/9/99	Lepitre	371	20.5	
60	5,872,817	2/16/99	Wei	375	341	
61	5,870,429	2/9/9	Moran, III et al.	375	222	
62	5,862,184	1/19/99	Goldstein et al.	375	295	
63	5,862,179	1/19/99	Goldstein et al.	375	242	
64	5,862,141	1/19/99	Trotter	370	468	
65	5,850,421	12/15/98	Misra et al.	375	354	
66	5,850,388	12/15/98	Anderson et al.	370	252	
67	5,844,940	12/1/98	Goodson et al.	375	222	
68	5,838,724	11/17/98	Cole et al.	375	222	
69	5,835,532	11/10/98	Strolle et al.	375	233	
70	5,825,823	10/20/98	Goldstein et al.	375	286	
71	5,825,816	10/20/98	Cole et al.	375	222	
72	5,822,371	10/13/98	Goldstein et al.	375	242	
73	5,815,534	9/29/98	Glass	375	326	
74	5,812,537	9/22/98	Betts et al.	370	286	
75	5,805,669	9/8/98	Bingel et al.	379	28	
76	5,784,415	7/21/98	Chevillat et al.	375	341	
77	5,757,865	5/26/98	Kaku et al.	375	344	
78	5,734,663	3/31/98	Eggenberger	371	39.1	
79	5,726,765	3/10/98	Yoshida et al.	358	412	
80	5,724,393	3/3/98	Dagdeviren	375	296	
81	5,710,792	1/20/98	Fukawa et al.	375	229	
82	5,694,420	12/2/97	Ohki et al.	375	222	
83	5,671,250	9/23/97	Bremer et al.	375	222	
84	5,646,958	7/8/97	Tsujimoto	375	233	
85	5,634,022	5/27/97	Crouse et al.	395	704	
86	5,625,643	4/29/97	Kaku et al.	375	222	

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87	5,566,211	10/15/96	Choi	375	332	
88	5,563,908	10/8/96	Kaku et al.	375	222	
89	5,533,048	7/2/96	Dolan	375	222	
90	5,519,703	5/21/96	Chauffour et al.	370	84	
91	5,513,216	4/30/96	Gadot et al.	375	233	
92	5,475,711	12/12/95	Betts et al.	375	240	
93	5,434,884	7/18/95	Rushing et al.	375	235	
94	5,432,794	7/11/95	Yaguchi	371	5.5	
95	5,418,842	5/23/95	Cooper	379	98	
96	5,402,445	3/28/95	Matsuura	375	229	
97	5,398,303	3/14/95	Tanaka	395	51	
98	5,386,438	1/31/95	England	375	121	
99	5,351,134	9/27/94	Yaguchi et al.	358	435	
100	5,285,474	2/8/94	Chow et al.	375	13	
101	5,265,151	11/23/93	Goldstein	379	97	
102	5,253,272	10/12/93	Jaeger et al.	375	60	
103	5,225,997	7/6/93	Lederer et al.	364	550	
104	5,142,552	8/25/92	Tzeng et al.	375	14	
105	5,111,481	5/5/92	Chen et al.	375	14	
106	5,107,520	4/21/92	Karam et al.	375	60	
107	5,065,410	11/21/91	Yoshida et al.	375	98	
108	5,007,047	4/9/91	Sridhar et al.	370	32.1	
109	5,005,144	4/2/91	Nakajima et al.	364	565	
110	4,991,169	2/5/91	Davis et al.	370	77	
111	4,953,210	8/28/90	McGlynn et al.	380	48	
112	4,943,980	7/24/90	Dobson et al.	375	42	
113	4,894,847	1/16/90	Tjahjadi et al.	375	121	
114	4,890,316	12/26/89	Walsh et al.	379	98	
115	4,833,706	5/23/89	Hughes-Hartogs	379	98	
116	4,756,007	7/5/88	Qureshi et al.	375	37	
117	4,731,816	3/15/88	Hughes-Hartogs	379	98	
118	4,208,630	6/17/80	Martinez	375	7	
119	3,622,877	11/23/71	MacDavid et al.	324	73 R	
120	5,839,053	11/17/98	Bosch et al.	455	13.1	
121	5,068,875	11/26/91	Quintin	375	78	
122	5,058,134	10/15/91	Chevillat et al.	375	39	
123	5,038,365	8/6/91	Belloc et al.	375	8	
124	4,967,413	10/30/90	Otani	371	37.4	
125	5,311,578	5/10/94	Bremer et al.	379	97	
126	5,317,594	5/31/94	Goldstein	375	8	
127	5,926,506	7/20/99	Berthold et al.	375	222	
128	5,491,720	2/13/96	Davis et al.	375	222	
129	5,353,280	10/4/94	Ungerböck	370	32.1	
130	5,852,631	12/22/98	Scott	375	222	
131	5,732,104	3/24/98	Brown et al.	375	222	
132	5,796,808	8/18/98	Scott et al.	379	93.31	

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	133	5,751,796	5/12/98	Scott et al.	379	93.31
	134	5,187,732	2/16/93	Suzuki	379	5
	135	5,640,387	6/17/97	Takahashi et al.	370	359
	136	5,751,717	5/12/98	Babu et al.	370	466
	137	5,784,377	7/21/98	Baydar et al.	370	463
	138	5,887,027	3/23/99	Cohen et al.	375	222
	139	5,850,388	12/15/98	Anderson et al.	370	252
	140	5,914,982	6/22/99	Bjarnason et al.	375	222
	141	5,726,765	3/10/98	Yoshida et al.	358	412
	142	5,850,421	12/15/98	Misra et al.	375	354
	143	5,729,226	3/17/98	Betts et al.	341	94
	144	5,862,184	1/19/99	Goldstein et al.	375	295
	145	5,911,115	6/8/99	Nair et al.	455	63
	146	5,838,724	11/17/98	Cole et al.	375	222
	147	5,784,415	7/21/98	Chevillat et al.	375	341
	148	5,844,940	12/1/98	Goodson et al.	375	222
	149	5,386,438	1/31/95	England	375	121
	150	5,881,102	3/9/99	Samson	375	222
	151	5,285,474	2/8/94	Chow et al.	375	13
	152	5,513,216	4/30/96	Gadot et al.	375	233
	153	5,835,532	11/10/98	Strolle et al.	375	233
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	156	WO 96/18261	6/13/96	PCT	H04M	11/00	
	157	0 669 740 A2	12/14/94	Europe	H04L	27/00	
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ph	166	Mueller et al., *Timing Recovery in Digital Synchronous Data Receiver*, IEEE Transactions on Communications, Vol. Com-24, No. 5, pp. 516-531 (May 1976)

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PH	168	Pahlavan et al., *Nonlinear Quantization and the Design of Coded and Uncoded Signal Constellations*, IEEE Transactions on Communications, **Vol. 39, No. 8**, pp. 1207-1215 (August 1991)
PH	169	Proakis, *Digital Signaling Over a Channel with Intersymbol Interference*, Digital Communications, pgs. 373, 381 (McGraw-Hill Book Company, 1983)
PH	170	Williams et al., *Counteracting the Quantisation Noise from PCM Codecs*, BT Laboratories, pp. 24-29 (UK)
PH	171	*A Digital Modem and Analogue Modem Pair for Use on the Public Switched Telephone Network (PSTN) at Data Signalling Rates of Up to 56 000 Bit/s Downstream and 33 600 Bit/s Upstream*, ITU-T V.90 (September 1998)
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PH	173	Bell, R.A., et al., *Automatic Speed Reduction and Switched Network Back-up*, IBM Technical Disclosure Bulletin, **Vol. 32, No. 1**, pp. 154-157 (June 1989)
PH	174	Abbiate, J.C., et al., *Variable-Data Transmission Modem*, IBM Technical Disclosure Bulletin, **Vol. 17, No. 11**, pp. 3301-3302 (April 1975)
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PH	176	*Line Quality Monitoring Method*, IBM Technical Disclosure Bulletin, **Vol. 18, No. 8**, pp. 2726-2726 (January 1976)
PH	177	*Loopback Tests for V.54 Data Communication Equipment*, IBM Technical Disclosure Bulletin, **Vol. 32, No. 3A**, pp. 295-299 (August 1989)
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PH	180	Marcus, Brian H, et al., *On Codes with Spectral Nulls at Rational Submultiples of the Symbol Frequency*, IEEE Transactions on Information Theory, **Vol. IT-33, No. 4**, pp. 557-568 (July 1987)
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	193	*Remote Modem-Type Self-Learning*, IBM Technical Disclosure Bulletin, **Vol. 28, No. 6**, pp. 2398-2399 (November 1985)
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	195	Bell, R. A., et al., *Automatic Speed Reduction and Switched Network Back-up*, IBM Technical Disclosure Bulletin, **Vol. 32, No. 1**, pp. 154-157 (June 1989)
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	198	Nobakht, R.A., *Trellis Subset Decoder Algorithm Based on a Pattern Recognition Scheme*, IBM Technical Disclosure Bulletin, **Vol. 37, No. 10**, pp. 693-697 (October 1994)
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	200	Barlet, J., et al., *Full Speed Recovery in High Speed Modems*, IBM Technical Disclosure Bulletin, **Vol. 23, No. 2**, pp. 641-643 (July 1980)
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	202	Dialog Abstract, *Two-speed full-duplex modem for telephone network*, PCT No. WO 8501407
	203	Dialog Abstract, *Digital data transmission system*, European Patent No. 124674
	204	Dialog Abstract, *Facsimile communication controller*, Japanese Publication No. 04-175060 (June 23, 1992)
	205	Dialog Abstract, *Picture communication equipment*, Japanese Publication No. 03-120954 (May 23, 1991)
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	207	Dialog Abstract, *Facsimile device*, Japanese Publication No. 57-164654 (October 9, 1982)
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